TheraSphere® is a treatment which is done in the Interventional Radiology Department. If you have more questions after reading this handout, call us at (608) 263-9729, press 3 between 8:00am -4:00pm, Monday through Friday.

What is a TheraSphere® (radioembolization) treatment?

TheraSphere® is an outpatient radiation treatment for unresectable hepatocellular carcinoma, metastatic liver cancer, and cholangiocarcinoma. This treatment is FDA approved as a “Humanitarian Use Device”. This means that your treatment will include reviewing and signing a special consent form and being included on a confidential patient registry. Therasphere treatment is safe and offers a likely benefit to patients who are good candidates for the treatment.

The treatment involves injecting a large number of tiny radioactive glass beads (TheraSpheres®) into the liver arteries (the blood vessels that bring oxygen to the liver). The TheraSpheres® travel through the blood vessels until they lodge into the smaller blood vessels of the liver tumor. The beads stay there and give off radiation that destroys the cancer cells with little injury to the healthy liver. After a few days, the beads lose their radioactivity.

Who can get TheraSphere® treatment?

Patients who have your type of cancer that cannot be removed with surgery, may be able to receive this treatment. Your doctor, the Interventional Radiology staff, and the Radiation Oncology staff will review your health history, recent scans, and your blood work. They will meet with you in clinic ahead of time to assess whether you are able to endure the treatment. Also, to make sure that you are a good candidate, 2 screening tests need to be done before the treatment.

1. A mapping angiogram of the liver is a test where x-ray dye is injected into the liver blood vessels to see how the blood flows through the liver. This test will provide a “road map” to help plan for the TheraSphere® treatment. Also, smaller blood vessels may be found that could carry some of the radioactive beads away from the liver to your stomach and intestine. These small blood vessels may need to be plugged up (embolized) to prevent the beads from going to your stomach and intestine. If TheraSphere® glass beads were to go to your stomach or intestine, bleeding or an ulcer may occur.

Before the angiogram, you will receive IV pain medicine and a sedative. An artery in your wrist or in your groin will be chosen as the best artery to go into. The area over the artery will be number with lidocaine. Then, a small tube will be placed in your artery and guided to your liver blood vessels. Dye for an x-ray is injected into the liver blood vessels and pictures are taken. Small blood vessels that go to the stomach or
bowel will be embolized. Your stomach and intestines get blood from many other blood vessels, so in most cases, it is not a problem to block these small blood vessels. After this test is complete, the tube in your artery will be removed. You will need to lie flat for 2-6 hours to allow the artery puncture site to seal up. You will not be able to drive or do heavy lifting for 24 hours after this test. You will be given additional instructions by the nurse.

2. While you recover from the angiogram of your liver, an MAA scan will be done. This is also called a lung shunting scan. This scan shows how much blood flows around the liver tumors and to your lungs. The amount of shunting will determine whether you are a candidate for TheraSphere® treatment. You will be placed under a scanner for ½ hour. After this test you will be taken to the recovery area until you are ready to go home.

If these tests show that it is safe for you to have TheraSphere® treatment, you will be set up for the first treatment within the next few weeks. The first treatment will treat liver tumors on one side of your liver. You may need a second treatment if you also have tumors on the other side of your liver or if your tumor is getting blood supply from multiple areas. Your treatment team will review this with you.

What can I expect during the TheraSphere® treatment?

Getting ready is the same as for the angiogram test. An IV will be placed in your hand or arm to be used for IV pain and sedative medicine. The Interventional Radiologist will place a small tube into your groin or wrist artery. The Interventional Radiologist will place a small tube into your groin or wrist artery and guided to your liver blood vessels. The Interventional Radiologist will use the mapping angiogram as a guide to place the tube in the correct vessels to direct the treatment to the tumor(s) in the liver. X-ray dye is used to make sure the tube is in the correct place. Then the Radiologist will inject the TheraSphere® beads. Once this is done, the tube will be removed from the artery, and you will be sent to the recovery area.

You will need to lie flat for 2-6 hours to make sure your artery puncture site seals up. You will not be able to drive or do heavy lifting for 24 hours. You will be allowed to go home if you live within about 2 hours of Madison. If you live further than 2 hours away we will help you arrange a hotel room for you to stay that night. The next morning you will come to see us in clinic. Prior to that visit, you will undergo a brief scan to assess the location of the radioactive particles. After this scan you will go to the
Interventional Radiology Clinic for a final check before you go home.

**What side effects can I expect after the TheraSphere® treatment?**

For 2-3 weeks after TheraSphere® treatment, most patients feel tired, have a decreased appetite, and may have a low grade fever. Rarely, patients have mild pain for a short time. If you are having pain you will be given pain medicine to control this.

**When will I receive my next treatment?**

If you need an additional treatment it will be scheduled for 4-8 weeks after your first treatment. We’ll want to be sure that you are not too tired and that your liver function tests are good. Most of the time, it is not necessary to repeat the “mapping angiogram” before your next treatment.

**How can TheraSphere® treatment help me?**

Since each patient is different, it is hard to predict how much you may be helped by TheraSphere® treatment. It depends on the size, number and location of your tumors. We will review that with you when we meet you in our clinic prior to the treatment. It has been found to be most helpful to patients who are good candidates for the treatment.

**Home Care After TheraSphere®**

Please look at the list below to avoid problems after your procedure.

**Diet:**
- **Drink plenty of fluids** - Drink at least eight-8 oz glasses of water, juice, or soda over the next 24 hours after treatment.
- You may eat whatever you like. Patients often tolerate smaller amounts of food eaten more often during the first few days after treatment.
- Do not drink any alcoholic beverages for 4 weeks after your SIRT treatment. This will give your liver the best chance of healing.

**Medicine:**
- You may restart your scheduled medicine as prescribed.
- You may already be on an anti-ulcer medicine or have been prescribed medicine for this as part of the procedure. Be sure to take this medicine for 4 weeks after the procedure.

**Site Care:**
- You may remove the dressing over the artery after 24 hours.
- Do not take a hot bath or shower for at least 24 hours.
- Look at the puncture site daily for 5 days.

**Activity:** **No strenuous physical activity of any kind.**
- Do not bend the leg that was used for the procedure more than needed for the next 24 hours after procedure.
- Do not lift greater than 10 pounds for 48 hours.
- Avoid sports, heavy cleaning, and stair climbing for 48 hours.
- No driving for 24 hours, or while taking pain medicine.

**Radiation Precautions:**
- The spheres used for this procedure contain a radioactive substance that takes time to become inactive. This means that for 3 days (72 hours) after your procedure, other people that you are around may be exposed
to radiation from your body. Please follow these simple guidelines:

1. **NO VISITORS WHO ARE PREGNANT.**
2. **NO PHYSICAL CONTACT OR EXTENDED TRAVEL WITH OTHERS FOR LONGER THAN 2 HOURS.**
3. **SLEEP IN BED ALONE.**
4. **DO NOT ALLOW CHILDREN OR PETS TO SIT ON YOUR LAP.**
5. **THERE IS NO NEED TO MAKE SPECIAL PLANS FOR HANDLING BODILY FLUIDS SUCH AS URINE, STOOL, BLOOD, OR VOMIT.**

- If you seek medical care somewhere else within 3 months of treatment, please inform your provider that you have undergone treatment with a radioactive substance. In addition, we suggest that you not undergo an open abdominal surgery within 3 months after treatment.

**When to Call the Doctor**

- You notice redness, swelling, or drainage at the groin site. Some bruising at the puncture site is normal and will go away in a couple days.
- You feel increased pain, numbness, coolness, or see blue bruising of the leg or hand where the puncture site is located.
- You have stomach pain that gets worse over time.
- You notice bleeding at the puncture site. Put pressure on the site to stop the bleeding and then call the phone number below.
- You have nausea and vomiting that you cannot control by medicine or lasts for more than 24 hours.
- You may have a fever for the first several days after the procedure. This can be relieved by taking acetaminophen (Tylenol®) 325 mg, 1-2 tablets every 4 hours; or, ibuprofen (Advil®) 200mg, 1-2 tablets, every 6 hours. Call if fever is more than 101°F for two readings taken 4 hours apart

**Phone Numbers**
Interventional Radiology Department: Mon-Fri. 8:00 am-4:00 pm. *(608) 263-9729, prompt 3 or 1-800-323-8924.*

After hours, weekends and holidays, this number will give you the hospital paging operator. Ask for Interventional Radiology Resident on call. Give your name and phone number with the area code. The doctor will call you back.